CIRM Shared Research Laboratories

Grant Award Details

CIRM Shared Research Laboratories

Grant Type: Shared Labs

Grant Number: CL1-00505-1.2

Project Objective: To provide support and resources for UCLA and external investigators engaged in stem cell research .

Investigator:

Name:	Owen Witte
Institution:	University of California, Los Angeles
Type:	PI

Human Stem Cell Use: Embryonic Stem Cell, iPS Cell

Cell Line Generation: Embryonic Stem Cell, iPS Cell

Award Value: $1,751,297

Status: Closed

Progress Reports

Reporting Period: Year 1

View Report

Reporting Period: Year 2

View Report

Reporting Period: Year 3

View Report

Reporting Period: Year 4

View Report

Reporting Period: Year 5

View Report

Reporting Period: Year 6

View Report

Grant Application Details

Application Title: CIRM Shared Research Laboratories

Public Abstract: Our plan is to establish a ~ 4,700 sq. ft. shared research laboratory dedicated to the experimental manipulation and ultimate clinical application of human embryonic stem cells (hESC). This Shared Research Laboratory (SRL) is centrally located on the main campus. The SRL will be used by researchers focused on understanding how hESCs are induced to generate specialized tissues used for regeneration of the blood forming, nervous, and musculoskeletal systems. The SRL will be a state of the art facility accommodating a hierarchy of functions that includes:

~ 1659ASF of general hESC, multi-user laboratory space will be assigned on a time share basis to investigators who do not have the capacity, or cannot due to federal restrictions, conduct research with hESC in their own research laboratory. In addition to cell culture facilities that will allow multiple groups to work simultaneously, space in this area includes an hESC analytic laboratory for the basic characterization of hESC and their derivatives.

~ 2245ASF of space will be used to establish a hESC GTP suite in which hESC free of infectious agents can be experimentally manipulated in a manner commensurate with their future clinical use. In addition to equipment necessary for the growth and genetic manipulation of hESC under GTP conditions, this facility will be able to distribute GTP maintained hESC lines to investigators.

Adjacent to the hESC GTP suite is the GMP laboratory suite including a hESC GMP derivation laboratory and bank. These facilities will allow hESCs to be derived and their progeny manipulated under conditions that meet federal guidelines for patient use. We have a strong track record of applying basic research findings to patients, and the adjacent location of multi-user, GTP, and GMP laboratories is an important factor that will allow basic hESC research findings to be developed and used to treat various human diseases.

The space for the SRL is part of our commitment to hESC research that includes 12 new stem cell faculty positions and matching funds for laboratory development. A committee comprised of faculty with extensive experience in the growth and manipulation of hESC is currently planning the development of the Shared Research Laboratory, and once it is established, they will provide regulatory oversight and supervise three staff responsible for the quality control of all equipment, ordering supplies, and scheduling access. The CIRM Shared Research Laboratory will be a state of the art facility in which intra- and extra-mural investigators can conduct hESC research not allowed due to federal restrictions or not technically feasible in their own laboratories.

Statement of Benefit to California:	The establishment of a hESC Shared Research Laboratory will make it possible for UCLA and non-UCLA investigators to conduct hESC research that is either not allowed due to current federal restrictions or not technically feasible in their own laboratories. As a result, investigators who would otherwise not be able to conduct hESC research will be able to become active in this area. This increase in the number of hESC scientists will in turn lead to new insights that will further increase the prominence of California as a leader in hESC research. A second benefit of the shared research laboratory is that the number of researchers trained to work with hESC will be increased, and this will ensure the availability of a skilled workforce available to fill jobs in the private biotechnology and pharmaceutical industry. These individuals will be a valuable resource for companies already located in California and will be an important incentive for others to relocate here. The plan to establish a Shared Research Laboratory designed to facilitate the translation of basic science to patients is a third benefit to the State. As described in the application, separate laboratory areas have been dedicated to the maintenance and manipulation of clinical grade hESCs, and this in turn will decrease time and costs of translating basic science discoveries to the clinic. This “bench to bedside” philosophy is consistent with our established track record of applying basic research to treat diseases. Thus, in addition to the direct benefit to patients and their families, the use of hESC to treat chronic diseases could reduce health care costs.